What to Ask

Builders, Realtors, Roofers and Yourself

About Protecting Your Home from Hurricanes, High Winds and Hail.

Texas Department of Insurance

Strengthening Homes and Safeguarding Families

FLASH inc.

FEDERAL ALLIANCE FOR SAFE HOMES

www.flash.org

Asking the following questions will help protect your home, family and possessions from the natural disasters to which Texas is most vulnerable: hurricanes, high winds and hail. (We also give you the answers.) This publication is a must-read if you plan to build a new home, remodel, replace roofing, windows, doors, skylights, buy a new or older home, or just want to make your home more resistant to severe weather.

Questions to Ask
Before Roofing

1. How do I go about selecting the best contractor to install my new roof?

   Roof replacement on both new and existing homes is best performed by a professional roofing contractor. You should check references on the roofer selected. The Roofing Contractors Association of Texas has a list of member contractors in your area. Visit www.rooftex.com or call toll-free at 800-997-6631.

2. What are the best roofing material choices for my house based on weather conditions in my area of the country?

   Texas has two of the most severe weather conditions a roofing system can face: high winds and hail. Choose products that have been tested to ASTM D 3161 and have a 110 mph wind resistance or higher, (some go as high as 130 mph resistance while others as low as 60 mph) and ask for UL 2218 Class 4 impact-resistant products.

3. Are warranties an indication of how long my new roof will last?

   No. Warranties outline the manufacturer's liability and responsibility over a set period of years. Since most warranties are prorated, the manufacturer's liability continues to decrease as the months go by.

4. Is my roof decking acceptable as it is or should it be properly reattached or possibly be replaced while the existing roof has been removed?

   Inspect the decking when the roof is removed and replace damaged decking. For maximum wind and windborne debris resistance on new installations or where existing conditions would permit the use of thicker decking, use 5/8" thick plywood. Nail it with 10 penny common or 8 penny ring shank nails spaced at 4 inches along the panel edges and every 6 inches in the field of the plywood panel. Make sure the nails penetrate the decking directly into the roof framing.

   Look in the attic. If you can see nails along the sides of the rafters or trusses, where the nail penetrates the decking, your roof deck may not be securely fastened.

5. Can a secondary water barrier be installed before the new roof covering is installed?

Yes. Install self-adhering flashing tape or polymer bitumen strips (commonly called peel-and-seal) on top of the joints in your roof deck.

6. What kind of underlayment should I install?

Use 30# roofing felt, which is thicker and more durable than 15# felt.

7. What are flashings and how important are they in the reroofing process?

Flashings are connections to the roof covering to any protrusion in the roof system or any wall that the roof butts up to. These are critical areas that will allow rain to penetrate if they are not installed and sealed properly.

8. Does my home have adequate roof-to-wall connections and gable end bracing?

If you are in a high wind area, roof-to-wall connections are recommended. Install these brackets when the roof is removed. Bracing may be beyond your roofing contractor's scope and he or she may have to work with a building contractor. The bottom decking will have to be removed, bracing installed, and then the decking replaced.

Collapse of a gable end wall is a common failure during hurricanes. To accommodate the strong pressures of hurricane force winds, gable ends need additional bracing. Information on this procedure is available from the Federal Alliance for Safe Homes (www.flash.org).

9. How can I tell if my home has adequate ventilation?

A roof should have one square foot of net ventilation area for every 150 square feet of attic floor space. Ventilation devices must be fastened or secured to the roof deck to resist wind pressures.

10. How can I verify if my roof covering was properly installed?

Prior to installation of the roof covering call the local windstorm field office in your area or 1-800-248-6032 to schedule a free inspection with a TDI representative. Visit www.tdi.state.tx.us for details.

11. If I want to install or need to replace my skylights, what do I need to know about getting the right skylight installed for my house?

Skylights are extremely vulnerable to wind borne debris and hail. Skylights should be tested in accordance with ASTM E 1886 and ASTM E 1996 or other approved impact standards.

Questions to
Ask Your Builder

7. Impact-resistant windows.

Impact-resistant windows are designed to resist a combination of impact and continuous wind pressure. Always use products that have been tested to one of these standards - ASTM E 1886 or ASTM E 1996 — and have been designated as such through a recognized product approval system.

8. Impact-resistant exterior wall surfacing?

Some siding manufacturers market their products as impact-resistant, but at this time a safer choice might be a hard surface such as brick, stone, or stucco.

9. Wind-resistant garage doors?

Garage doors are particularly vulnerable to high winds, because of the long span of the opening they cover and the relatively lightweight material they are made of. Two options are available for strengthening garage doors: replace the door and track with a system that is designed to withstand high winds and wind-borne debris; or use a tested and approved impact resistant covering. In Texas, garage doors must be tested in accordance with ASTM E 330. Glass panels should rated with ASTM E 1996 standards

Before building a home in a tornado region, are the following items included?

1. Wind-resistant roofing material conforming to ASTM D 3161 (or better) requirements.

Choose products that have been tested to ASTM D 3161 and have a 110 mph wind resistance or higher.

2. Class 4 impact-resistant roofing material.

The UL 2218 impact test rates roofing materials' resistance to impact as Class 1 through 4, with Class 4 being the most resistant. Insurance credits are generally based on the product's rating.

3. 5/8' thick plywood roof deck attached with 10d common nails spaced 4" O.C. at the panel edges and gable ends and 6" O.C. in the field of the panel.

Use this method to make your roof more impact-resistant.

4. A secondary water barrier in addition to the underlayment.

A secondary water barrier provides protection if the roof covering is damaged. This is achieved by installing self-adhering flashing tape or modified polymer bitumen strips on top of the joints in the roof deck. The underlayment should be a 30# roofing felt, which is thicker and heavier than 15# felt.

5. Porch exterior walls properly connected to the foundation.

Porch walls should be treated as any other exterior wall and anchored to the foundation. If blown loose it can be a threat to the main house in high wind situations.

6. Roof-to-wall and wall-to-foundation connectors.

The only way to create a wind-resistant home is to secure all connections - roof to wall, floor to floor, and wall to foundation. This is accomplished by installing hurricane straps or clips at those intersections.

7. A safe room.

A safe room, or storm shelter, provides the highest degree of protection for you and your family from the dangerous forces of extreme winds and debris impacts. Safe rooms can be site-built or manufactured and can be installed in new or existing homes.

8. Gable end bracing sufficient to withstand severe weather wind loads?

Homes with gabled ends are more likely to suffer damage, such as collapse of the end wall, because they are often not braced properly during construction. Continuous wall construction or balloon framed gable ends perform best in windstorms.

9. Impact-resistant windows?

Impact-resistant windows are designed to resist a combination of impact and continuous wind pressure. Always use products that have been tested to one of these standards - ASTM E 1886 or ASTM E 1996 — and have been designated as such through a recognized product approval system.

10. Impact and wind-resistant garage doors?

Garage doors are particularly vulnerable to high winds, because of the long span of the opening they cover and the relatively lightweight material they are made of. Two options are available for strengthening garage doors: replace the door and track with a system that is designed to withstand high winds and wind-borne debris; or use a tested and approved impact resistant covering. In Texas, garage doors must be tested in accordance with ASTM E 330. Glass panels should be rated with ASTM E 1996 standards.

Questions to Ask Before

Installing Opening Protection

1. What will protecting openings (doors, windows, garage doors, skylights) in my house do for me?

   Impact resistant windows and doors will protect occupants from flying debris including the glass from the windows. In addition, your possessions will not be exposed to the elements, preventing damage to the contents and possibly even loss of irreplaceable personal possessions. Further, breach of the exterior openings in a high wind event has often compromised the overall structural integrity of the home.

2. What are the choices for protecting window and door openings in my home?

   Impact-resistant windows and doors; hurricane shutters customized to fit openings; and, as an emergency measure, plywood panels can be used if installed properly.

3. How are products tested and is it necessary to insist on a product that has met these standards?

   Impact-resistant glass and shutters are designed and tested to meet a combination of impact and continuous wind pressure. Always use products that have been tested to one of these standards —ASTM E 1886 and ASTM E 1996 — and have been designated as such by a recognized product approval.

4. Is it necessary to protect my garage doors?

   Garage doors are particularly vulnerable to high winds, because of the long span of the opening they cover and the relatively lightweight material they are made of. Two options are available for strengthening garage doors: replace the door and track with a system that is designed to withstand high winds and wind-borne debris; or use a tested and approved impact resistant covering. In Texas, garage doors must be tested in accordance with ASTM E 330. Glass panels should rated with ASTM E 1996 standards.

5. Are both impact-resistant windows and shutters necessary?

   No. While installing shutters over impact resistant windows would give added protection if the outer system failed, it is not necessary to install both

Before building a home in a hail region, are the following items included?

1. 5/8” thick plywood decking attached with 10d common nails spaced 4” O.C. at the edges and gable ends and 6” O.C. in the field of the panels.

   Use this method to make your roof more impact-resistant.

2. Wind-resistant roofing material conforming to ASTM D 3161 (or better) requirements.

   Choose products that have been tested to ASTM D 3161 and have a 110 mph wind resistance or higher.

3. Class 4 impact-resistant roofing material.

   The UL 2218 impact test rates roofing materials’ resistance to impact as Class 1 through 4, with Class 4 being the most resistant. Insurance credits are generally based on the product’s rating.

4. A secondary water barrier beneath the underlayment.

   A secondary water barrier provides protection if the roof covering is damaged. This is achieved by installing self-adhering flashing tape or modified polymer bitumen strips on top of the joints in the roof deck. The underlayment should be a 30# roofing felt, which is thicker and heavier than 15# felt.

5. Gable end bracing to resist extreme wind force.

   Homes with gabled ends are more likely to suffer damage, such as collapse of the end wall, because they are often not braced properly during construction. Continuous wall construction or balloon framed gable ends perform best in windstorms.

6. Roof-to-wall and wall-to-foundation connectors.

   The only way to create a wind-resistant home is to secure all connections - roof-to- wall, floor-to-floor, and wall-to-foundation. This is accomplished by installing hurricane clips at those intersections.

Questions to Ask Your Builder

6. Truss-to-wall connectors and wall-to-foundation connectors.

   The only way to create a wind-resistant home is to secure all connections - roof-to- wall, floor-to-floor, and wall-to-foundation. This is accomplished by installing hurricane clips at those intersections.

7. Impact-resistant windows or hurricane shutters.

   Impact-resistant windows are designed to resist a combination of impact and continuous wind pressure. Always use products that have been tested to one of these standards - ASTM E 1886 or ASTM E 1996 — and have been designated as such through a recognized product approval system.

8. Garage door/doors that are impact resistant.

   Garage doors are particularly vulnerable to high winds, because of the long span of the opening they cover and the relatively lightweight material they are made of. Two options are available for strengthening garage doors: replace the door and track with a system that is designed to withstand high winds and wind-borne debris; or use a tested and approved impact resistant covering. In Texas, garage doors must be tested in accordance with ASTM E 330. Glass panels should rated with ASTM E 1996 standards.

9. Skylights that are impact-resistant.

   Skylights are extremely vulnerable to wind borne debris and hail. Skylights should be tested in accordance with ASTM E 1886 and ASTM E 1996 or other approved impact standards.

10. The required upgrades to qualify for all insurance credits or discounts offered.

    Investigate possible construction credits and discounts available through your insurance company and then review with your builder.

11. A safe room.

    A safe room, or storm shelter, provides the highest degree of protection for you and your family from the dangerous forces of extreme winds and debris impacts. Safe rooms can be site-built or manufactured and can be installed in new or existing homes.

12. Continuous load path construction.

    When a house is being constructed. it is an opportune time to build in a continuous load path, creating a structure highly resistant to extreme wind force. Balloon framing and the use of hurricane straps or clips connecting all intersections including the foundation can easily be designed into the structure at this time.

6. If I choose impact-resistant windows, are the window frames also wind resistant?

Impact-resistant window frames are equally important as the strength of the glass. Windows are tested as a unit that includes the glass, frame, attachment hardware and installation method. Impact-resistant windows and shutters should always be installed following the manufacturer's recommendations.

The Texas Department of Insurance will accept, for review, building products that have been tested in accordance with either ASTM E 1886 and ASTM E 1996 or other approved standards.

7. Does a product that qualifies for Force 12 winds meet an acceptable standard for hurricane force winds?

Force 12 only meets the very minimum of a category 1 hurricane (74 mph). If you are in an area that may be affected by a hurricane, only use products tested and approved for hurricane force winds.

8. How do I compare galvanized shutters with aluminum shutters?

If both have been tested and qualified by an approved impact and continuous wind pressure standard, they should perform the same. Impact protective systems must be tested in accordance with ASTM E 330. The edition used shall be as outlined in the building specifications adopted by the Texas Department of Insurance.

The Texas Department of Insurance will accept, for review, building products that have been tested in accordance with either: ASTM E 1886 and ASTM E 1996 or other approved impact standards.

9. Where can I look to find information about possible insurance credits or discounts my home may qualify for by installing opening protection?

Discounts and credits may be available through your insurance carrier but will vary from one company to another. Contact your insurance agent for information.

10. For opening protection not permanently mounted (panel type protection), what kind of pre-planning is necessary?

Make sure your installer pre-marks the panel and leaves a layout plan and installation instructions. Go through the process of installing covers on one or two openings at your leisure to get a feel for time needed and difficulty.

Questions to
Ask Your Realtor

1. Is Windstorm Insurance mandatory? Do I really need it?

   Mortgage companies typically require full coverage. In the event you decide to sell your home the Certificate of Compliance (WPI-8) is an excellent selling point which proves code compliance and provides eligibility for windstorm coverage.

2. If I have flood insurance, isn't that all I need?

   No. A flood policy does not cover ANY damage to a structure due to wind and hail.

3. Are all counties affected by Windstorm requirements? Is this house in a windstorm (high wind) area (first Tier County)?

   Just the counties which border the Gulf of Mexico (1st Tier Counties). Chambers, Jefferson, Galveston, Brazoria, Matagorda, Calhoun, Refugio, San Patricio, Aransas, Nueces, Kleberg, Kenedy, Willacy, and Cameron. And portions of the following cities east of SH 146 in Harris County; Pasadena, Shoreacres, Morgan's Point, La Porte, and Seabrook.

4. Is the house currently insured for wind and hail insurance?

   The Certificate of Compliance is "proof of eligibility" for wind and hail insurance coverage through the State's catastrophe pool, the Texas Windstorm Insurance Association (TWIA). Homeowners may contact the TDI at 1-800-248-6032 or search www.tdi.state.tx.us for more information about the Windstorm Inspection Program or search for the Certificate online.

5. What is the claims history on this house? What repairs have been made?

   The current insurance agent should have answers to all questions concerning the coverage on this structure. Including any claims filed.

6. Can I insure just the roof?

   No. The entire structure must be insured to meet applicable code standards.

7. Who can conduct windstorm inspections?

   An employee of the TX Dept of Ins, Windstorm Inspections Division, or an engineer who has been appointed by the Commissioner of Insurance.

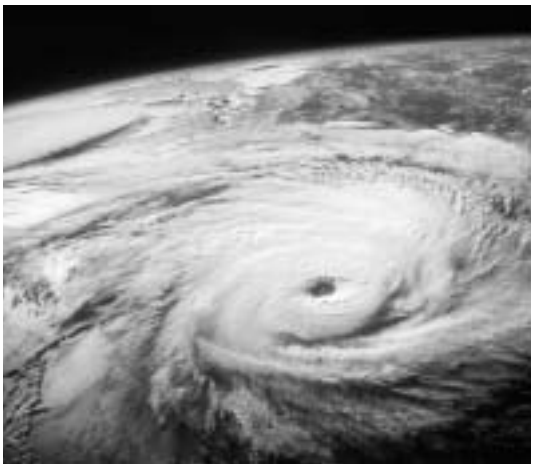
8. What if the house does not pass inspection? What is my alternative/next step?

   Completed structures can be certified by appointed engineers once deficiencies are corrected and code compliance met.

Questions to

Ask Your Builder

Before building a home in a hurricane region, are the following items included?



1. Is the house built to the windstorm building code and eligible for wind and hail insurance coverage?

   In the first tier counties along the Texas coast, it is in the best interest of a homeowner to require the builder to furnish a Certificate of Compliance upon completion of the home. The Certificate of Compliance is "proof of eligibility" for wind and hail insurance coverage through the State's catastrophe pool, the Texas Windstorm Insurance Association (TWIA). Homeowners may contact the TDI at 1-800-248-6032 or search www.tdi.state.tx.us for more information about the Windstorm Inspection Program.

2. Wind-resistant roofing material conforming to ASTM D 3161 (or better) requirements.

   Choose products that have been tested to ASTM D 3161 and have a 110 mph wind resistance or higher.

3. Class 4 impact-resistant roofing material.

   Roofing products are tested for impact resistance using the UL 2218 impact resistance test. Approved products are classified 1 through 4, Class 4 being the most resistant. In an area where windborne debris is likely, Class 4 would be the better choice.

4. A secondary water barrier under the roofing material.

   A secondary water barrier provides protection if the roof covering is damaged. This is achieved by installing self-adhering flashing tape or modified polymer bitumen strips on top of the joints in the roof deck. The underlayment should be a 30# roofing felt, which is thicker and heavier than 15# felt.

5. Are gable ends adequately braced to withstand severe windstorms?

   Collapse of a gable end wall is a common failure during hurricanes. To accommodate the strong pressures of hurricane force winds, gable ends need additional bracing. Information on this procedure is available from the Federal Alliance for Safe Homes (www.flash.org).

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